

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1 1. (Previously Presented) A computer system comprising:
2 at least one processor; and
3 a flexible operating system executable on the at least one processor to:
4 determine whether said flexible operating system is being used as a native
5 operating system or as a virtualized operating system on said computer system, wherein the
6 determining is based on checking a variable set during a boot process of the computer system;
7 and
8 execute in a first manner as a native operating system on the computer system in
9 response to detecting that said flexible operating system is being used as the native operation
10 system, and execute in a second manner as a virtualized operating system on said computer
11 system in response to detecting that said flexible operating system is being used as the
12 virtualized operating system,
13 wherein said flexible operating system is configured to operate in a
14 non-virtualized environment when said flexible operating system is being used as the native
15 operating system, and is configured to operate in a virtualized environment when said flexible
16 operating system is being used as the virtualized operating system.

1 2. (Cancelled)

1 3. (Previously Presented) The computer system of claim 1 wherein said flexible
2 operating system executing in said second manner comprises said operating system acting as a
3 paravirtualized operating system.

1 4. (Previously Presented) The computer system of claim 3 wherein said
2 paravirtualized operating system is operable to make a call to a Virtual Machine Monitor (VMM)
3 for performing at least one privileged operation.

1 5. (Previously Presented) A computer system comprising:
2 at least one processor; and
3 a flexible operating system executable on the at least one processor to:
4 determine whether said flexible operating system is being used as a native
5 operating system or as a virtualized operating system on said computer system; and
6 execute in a first manner as a native operating system on the computer system in
7 response to detecting that said flexible operating system is being used as the native operation
8 system, and execute in a second manner as a virtualized operating system on said computer
9 system in response to detecting that said flexible operating system is being used as the
10 virtualized operating system,
11 wherein said flexible operating system is configured to operate in a
12 non-virtualized environment when said flexible operating system is being used as the native
13 operating system, and is configured to operate in a virtualized environment when said flexible
14 operating system is being used as the virtualized operating system,
15 wherein said flexible operating system executing in said second manner
16 comprises said operating system acting as a paravirtualized operating system, wherein said
17 paravirtualized operating system is operable to make a call to a Virtual Machine Monitor (VMM)
18 for performing at least one privileged operation,
19 wherein said flexible operating system is executable to determine whether said flexible
20 operating system is being used as the native operating system or the virtualized operating system
21 by:
22 checking a global variable that indicates whether said flexible operating system is being
23 used as the native operating system or as the virtualized operating system on said computer
24 system.

1 6. (Previously Presented) The computer system of claim 5, wherein said flexible
2 operating system is executable to further:

3 execute an instruction which, when the flexible operating system is being used as the
4 virtualized operating system, causes a Virtual Machine Monitor (VMM) to set at least one
5 configuration bit to a first value, and when the flexible operating system is being used as the
6 native operating system, causes the VMM to set said at least one configuration bit to a different
7 value.

1 7. (Cancelled)

1 8. (Previously Presented) The computer system of claim 1, wherein said flexible
2 operating system is executable to further:

3 make a call to a Virtual Machine Monitor (VMM) for performing at least one privileged
4 operation when the flexible operating system is executed in the second manner as the virtualized
5 operating system.

1 9. (Previously Presented) The computer system of claim 8 wherein making the call
2 to said VMM uses an Application Program Interface (API) defined for said VMM.

1 10. (Cancelled)

1 11. (Previously Presented) A method comprising:
2 implementing at least one operating system on a computer system;
3 determining, by said computer system, whether said at least one operating system is a
4 native operating system or a guest operating system on a virtual machine, wherein the
5 determining is based on checking a variable set during a boot process of the computer system;
6 said at least one operating system operating in a first manner if determined that it is a
7 native operating system, wherein the native operating system operates in a non-virtualized
8 environment; and
9 said at least one operating system operating in a second manner if determined that it is a
10 guest operating system on a virtual machine, wherein the guest operating system operates in a
11 virtual environment provided by the virtual machine.

1 12. (Previously Presented) The method of claim 11 wherein said determining
2 comprises:
3 said at least one operating system determining during runtime based on the variable
4 whether the at least one operating system is being used as said native operating system or as said
5 guest operating system on the virtual machine.

1 13. (Previously Presented) The method of claim 12 wherein said variable is a global
2 variable.

1 14. (Previously Presented) The method of claim 11 wherein said first manner
2 comprises said native operating system managing hardware resources of the computer system.

1 15. (Previously Presented) The method of claim 14 wherein said second manner
2 comprises said guest operating system having access to the computer system hardware resources
3 that are managed by a Virtual Machine Monitor (VMM).

1 16. (Previously Presented) The method of claim 15 wherein said guest operating
2 system makes, for at least one privileged operation, a call to the VMM.

1 17. (Previously Presented) A computer system comprising:

2 at least one processor;

3 a virtual machine monitor (VMM); and

4 an operating system executable on the at least one processor to:

5 determine whether said operating system is running as a virtualized operating
6 system or a native operating system, wherein the determining is based on checking a variable set
7 during a boot process of the computer system; and

8 adapt operation of said operating system depending on whether it is running as the
9 virtualized operating system or native operating system, wherein the native operating system is
10 configured to manage hardware resources in a non-virtualized environment without the VMM,
11 and wherein the virtualized operating system is configured to manage hardware resources using
12 the VMM.

1 18. (Previously Presented) The computer system of claim 17 wherein said variable is

2 a global variable.

1 19. (Previously Presented) The computer system of claim 18 wherein said operating

2 system is executable to check said value of said global variable before performing certain

3 privileged operations.

1 20. (Previously Presented) The computer system of claim 17 wherein said operating

2 system is executable to perform the determining by determining, before execution of certain

3 privileged instructions, whether said operating system is running as the virtualized operating

4 system or native operating system.

1 21. (Cancelled)

1 22. (Previously Presented) The computer system of claim 17 wherein said operating

2 system when running as the virtualized operating system executes privileged instructions by

3 making at least one call to the VMM.

23. (Cancelled)

24. (Previously Presented) The computer system of claim 17 wherein said operating system performs the determining by executing an instruction which, when the operating system is being used as the virtualized operating system, causes the VMM to set at least one configuration bit to a first value.

25. (Previously Presented) The computer system of claim 24 wherein said operating system performs the determining by further determining whether said operating system is running as the virtualized operating system or native operating system based at least in part on a determined value of at least one configuration bit after execution of said instruction.

26. (Cancelled)

27. (Previously Presented) A system comprising:
hardware resources;
a virtual machine monitor (VMM); and
a flexible operating system for managing said hardware resources, wherein said flexible operating system is operable to determine whether it is running in a virtualized environment or in a native, non-virtualized environment, wherein the determining is based on checking a variable set during a boot process of the system, wherein said flexible operating system is operable to selectively execute in a first manner if determined that said flexible operating system is running in the native environment and in a second manner if determined that said flexible operating system is running in the virtualized environment, wherein in the first manner said flexible operating system is configured to manage said hardware resources without using the VMM, and wherein in the second manner said flexible operating system is configured to manage said hardware resources using the VMM.

28. (Cancelled)

1 29. (Previously Presented) The system of claim 27 wherein said first manner
2 comprises acting as a native operating system.

1 30. (Previously Presented) The system of claim 27 wherein said second manner
2 comprises acting as a virtualized operating system.

1 31. (Previously Presented) The system of claim 30 wherein said virtualized operating
2 system is operable to make a call to the VMM for performing at least one privileged operation.

1 32. (Cancelled)

1 33. (Previously Presented) The system of claim 27 wherein said flexible operating
2 system is configured to adapt its operation to make a call to said VMM for performance of at
3 least one privileged instruction when said flexible operating system determines that said flexible
4 operating system is running in the virtualized environment.

1 34. (Cancelled)

1 35. (Previously Presented) A system comprising:
2 at least one processor;
3 a flexible operating system executable on the at least one processor and that is capable of
4 acting as either a native operating system or as a virtualized operating system; and
5 means for determining whether the flexible operating system is to be used as a native
6 operating system in a non-virtualized environment without a Virtual Machine Monitor (VMM)
7 or as a virtualized operating system in a virtualized environment with the VMM, wherein the
8 determining means checks a variable set during a boot process of the system for determining
9 whether the flexible operating system is being used as the native or as the virtualized operating
10 system.

1 36. (Previously Presented) The system of claim 35 wherein the determining means
2 makes the determination during runtime of the system.

1 37. (Previously Presented) The system of claim 35 further comprising:
2 means for virtualizing resources of said system and multiplexing said resources among
3 one or more virtualized operating systems.

1 38. (Cancelled)

1 39. (Previously Presented) The system of claim 35 wherein if determined that said
2 flexible operating system is being used as the virtualized operating system, said flexible
3 operating system is configured to act as the virtualized operating system.

1 40. (Previously Presented) The system of claim 35 wherein if determined that said
2 flexible operating system is being used as the native operating system, said flexible operating
3 system is configured to act in a first manner, and if determined that said flexible operating
4 system is being used as the virtualized operating system, said flexible operating system is
5 configured to act in a second manner.

1 41. (Cancelled)

1 42. (Previously Presented) The system of claim 35, wherein the virtualized operating
2 system is configured to manage hardware resources of the system by using the VMM, and
3 wherein the native operating system is configured to manage the hardware resources in the
4 non-virtualized environment without using the VMM.

1 43. (Previously Presented) The computer system of claim 1, wherein the virtualized
2 operating system is configured to manage hardware resources of the system by using a virtual
3 machine monitor (VMM), and wherein the native operating system is configured to manage the
4 hardware resources in the non-virtualized environment without using the VMM.

1 44. (Currently Amended) The computer system of claim 1, wherein the at least one
2 processor is configured to selectively set the variable to one of plural values during the boot
3 process, a first of the plural values to indicate that the flexible operating system is to be used as
4 the native operating system, and a second of the plural values to indicate that the flexible
5 operating system is to be used as the virtualized operating system,
6 wherein the flexible operating system is executable to check the variable during
7 ~~runtime~~runtime after the boot process.

1 45. (Previously Presented) The method of claim 11, further comprising:
2 selectively setting the variable to one of plural values during the boot process, a first of
3 the plural values to indicate that the at least one operating system is to be used as the native
4 operating system, and a second of the plural values to indicate that the at least one operating
5 system is to be used as the guest operating system; and
6 the at least one operating system checking the variable during runtime after the boot
7 process.

1 46. (Previously Presented) The computer system of claim 17, wherein the at least one
2 processor is configured to selectively set the variable to one of plural values during the boot
3 process, a first of the plural values to indicate that said operating system is to be used as the
4 native operating system, and a second of the plural values to indicate that said operating system
5 is to be used as the virtualized operating system, wherein said operating system is executable to
6 check the variable during runtime after the boot process.

1 47. (Previously Presented) The system of claim 37, further comprising at least one
2 processor configured to selectively set the variable to one of plural values during the boot
3 process, a first of the plural values to indicate that the flexible operating system is to be run in the
4 native environment, and a second of the plural values to indicate that the flexible operating
5 system is to be fun in the virtualized environment,
6 wherein the flexible operating system is operable to check the variable during runtime
7 after the boot process.